

Marking the 14th Anniversary of Fish for All Research and Training Centre

**An Institution for increasing the resilience
capacity of small-scale fishing, farming
and tribal communities**



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M S SWAMINATHAN RESEARCH FOUNDATION

Marking the 14th Anniversary of Fish for All Research and Training Centre

An Institution for increasing the
resilience capacity of small-scale fishing, farming and tribal communities

ANNUAL REPORT 2023

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The report pays tribute to Our Founder Chairman
Dr. M.S. Swaminathan,
whose vision and unstinting efforts were pivotal in
establishing this centre and inspiring the team to excel in
achieving our vision for the Fish for All Centre





CONTENT

S. No	Content	Page
1	Genesis of the program	17
2	Fish For All Research And Training Centre (FRTC)	18
3	Broad Objectives of the Fish For All Centre	19
4	Progress and achievement during the year 2023	21
4.1	Marine Fisheries Resource Enhancement and Management	21
4.2	Action towards Minimizing the Impact of Ghost Gears	23
4.3	Post- Harvest Fisheries Management and Livelihood Promotion	24
4.4	Culture Fisheries and Resource Enhancement	26
4.5	Capacity Building Program and Outreach	27
4.6	Promotion of Fish Farmer Producer Organization for Collective Action	31
4.7	Every Child A Scientist Program	32
4.8	Students Internship and Exposure Learning	33
4.9	Grooming Community members as local experts	34
4.10	Exposure visit of farmers, fishers and other stakeholders	34
4.11	Leveraging government schemes through linkages	35
5	Major Events held during the year	36
6	Success stories	40
7	Awards & Recognitions	45
8	Projects and Programmes implemented by the Centre in 2023	49
9	Publications	51

FOREWORD CHAIRPERSON

The 2004 Indian Ocean tsunami was a tipping point; the event wrecked the coast of India leading to the loss of innumerable lives and livelihoods. Yes, we were used to floods and cyclones year after year, but a catastrophe of this magnitude meant that there was an urgent need to improve preparedness and build resilience among coastal communities. The best long-term preparedness is the capacity development of local communities to enable them to avoid risk and protect themselves from natural calamities while strengthening and diversifying livelihoods to withstand the effects of climate change.



With these objectives, MSSRF established the “Fish for All Research and Training Centre” (FRTC) in 2009 with initial funding from the Tata Trusts. On the 26th of December 2023, the centre completed the 14th year of its existence with a significant impact on improving community resilience, reducing risks and addressing the needs of the fishing community.

This Annual Report captures highlights of our Fish for All Centre activities for the year 2023 towards the Sustainable Development Goals. We hope that the experience gained will help in replicating these successes elsewhere and also in addressing newer areas of concern. The impact of climate change is already being felt by coastal communities and more research, knowledge generation and practical actions are needed to mitigate the adverse impacts on health, livelihoods and the economy of the region.

I hope that all those who read this report will be inspired by the example set by this unique Fish for All Research and Training Centre. These activities were carried out with generous support extended by Tata trusts, INCOIS-MoES, Qualcomm Wireless Reach, NABARD, ICAR-NBFGR, UNDP-SGP, Department of Science and Technology, NFDB, Reliance Foundation, USAID, State and Centre government departments, local government, panchayats and community members.

The achievements reported here come from the hard work and commitment of our scientists, development workers, administrative staff and students at our Fish for All Centre and I wish them continued success in their efforts to improve the lives and livelihood of the coastal community.

Dr. Soumya Swaminathan
Chairperson, MSSRF

MESSAGE EXECUTIVE DIRECTOR

Marine Fisheries spread across the length of the Coastline of Indian mainland, Andaman & Nicobar, and Lakshadweep Islands is 7,516.6 km and passes through 13 states and union territories (UTs). This is a crucial sector contributing 1.1% to the GDP and the food and nutritional security of our country, offering employment to over 1.4 crore people. This sector is also facing a variety of risks and challenges, including exposure to natural disasters arising from ocean dynamics including wave and wind actions, market and societal pressures. Hence it is important to focus on both marine and land-based resources and their conservation and sustainable use linked with the livelihood security of the small and marginal fisher families for greater resilience.



With this objective at the forefront, MSSRF established the Fish for All Research and Training Centre, Poompuhar in 2009, and it has now completed its 14th year in operation. The Centre serves as a platform that brings together key stakeholders in coastal system research and development, focusing on small and marginalized sections of people in coastal regions. It enables them to achieve self-reliance through knowledge empowerment, skill development, and technology upgradation.

Last year, the Centre won the Women Connect Challenge Award for its efforts in promoting the inclusion of fisherwomen in digital technology, which is an increasingly important tool for education, financial inclusion, entrepreneurship, civic participation, and information. The Fisher Friend Mobile Application, one of the Centre's flagship programs, has reached over 1,10,000 fishers across 671 landing centres in 59 coastal districts in nine states. Additionally, the Centre is committed to minimizing pollution in the marine and coastal environment through a community-centric collective approach, which has yielded a very positive impact on the ground.

I extend my congratulations to Dr Velvizhi, Head, Fish for All Research and Training Centre, and all her colleagues on the significant achievements of the Centre, and wish them success in their future endeavours.

Dr. G N Hariharan
Executive Director (Research), MSSRF



Consultative Workshop on Commemorating "World Fisheries Day"

The Audio...ory S...
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MESSAGE KEY PARTNERS

I extend my warmest congratulations to MSSRF as they commemorate the significant 14th anniversary of the Fish for All Centre, scheduled for January 4, 2024. It is truly an honour for INCOIS to have been a part of the Centre's developmental journey. INCOIS remains committed to delivering high-quality ocean information and advisory services to society, industry, government agencies, and the scientific community through sustained ocean observations and constant improvements through systematic and focused research. Our fruitful collaboration with MSSRF, spanning over two decades, focuses on training fishermen and stakeholders in the effective utilization of INCOIS's Ocean State Forecast services and the validation of Potential Fishing Zones. MSSRF's pivotal role in disseminating INCOIS advisory services among fishing communities is commendable and has significantly advanced our joint mission of reaching the unreached.



On this occasion, I express my profound gratitude and condolences for the sad demise of Prof. M. S. Swaminathan, the visionary founder of MSSRF, whose unwavering dedication has elevated the organization to its current stature, contributing significantly to various sectors and society. As the Fish for All Centre, MSSRF marks its 14th anniversary, I extend my best regards, anticipating continued growth and substantial contributions. I am confident that, following the path laid by the gracious founder, the institution will achieve even greater milestones in the years to come, ultimately benefiting society. Anticipating continued success for the Fish for All Centre and looking forward to our ongoing collaborative efforts in the years ahead, I extend my best wishes to the Fish for All Centre, MSSRF for a memorable celebration and sustained achievements.

Best Regards,

T. Srinivasa Kumar

Director, INCOIS

ICAR-NBFGR has been closely associated with the "Fish for All" centre of MSSRF at Poompuhar in the livelihood development of the fisher community of the Pichavaram region and the lower Cauvery basin. Over the years, our collaboration has been instrumental in reaching the unreached and addressing critical challenges in the fisheries sector. The Fish for All Centre has been a beacon of hope, fostering innovation, research, and community engagement. On this significant milestone, I wish to express my appreciation for the dedication and hard work of MSSRF in promoting responsible and inclusive fisheries development. The impact of the Fish for All Centre is evident in the positive changes it has brought to the lives of communities, emphasizing sustainable practices, and ensuring food security. It is a privilege to be part of this journey, and I look forward to witnessing the continued impact of the Fish for All Centre in the years to come.



Warm regards,

U. K. Sarkar

Director, ICAR-NBFGR, Lucknow

I am very happy to note that the MSSRF is observing the 14th anniversary of the Fish for All Centre on 4th January 2024. MSSRF and ICAR-CIFT have a long-standing association and we have actively partnered with the Foundation in their capacity building efforts, especially working closely with the Fish for All Centre, Poompuhar. The Centre is doing commendable work in the sector to bring about much needed changes through technology, training and other forms of support. Their work with fisherwomen needs special mention. The Centre has actively engaged with relevant stakeholders like the state, research organizations, NGOs etc. and tried to bring in convergence of efforts, that are now bearing fruit as reflected from the programmes of the Centre and its impact in several states. We are also proud of our engagement with the Centre which is one way of reaching out to the fishing community and extending our technologies.



I wish the Centre all success in their future endeavours and hope to strengthen our association to work towards the betterment of the fisheries sector and communities' dependent on it.

Dr. George Ninan

Director, ICAR - Central Institute of Fisheries Technology, Cochin

I am extremely happy to know that the Fish for All Centre of MSSRF is celebrating its 14th Annual Day on the 4th January, 2024. It is heartening to know that the Centre has been handholding the coastal population in developing alternative livelihoods, mangrove conservation, natural resources management, women development, imparting science based learning to school children and capacity development of coastal communities. I am glad that ICAR-CIBA has been partnering with MSSRF in developing the livelihoods of coastal families adopting brackish water aquaculture technologies, creating awareness and developing needed skill capacities for the coastal families. I am sure that Dr Sowmya Swaminathan, Chairperson, MSSRF will continue to carry forward the legacy of her legendary father late Prof.M.S.Swaminathan, the founder of MSSRF with innovative thoughts and vision. I am looking forward to our continued partnership in the envisaged programmes in the coming days.



Dr. Kuldeep K. Lal

Director, ICAR – CIBA, Chennai

Heartfelt Appreciation for 14 years of Fish for All Centre's remarkable contribution to coastal communities and Marine life!

I Express my profound admiration for the exceptional efforts and contributions your organisations has made in the aftermath of the devastating Tsunami in December 2004. The relief measures and rehabilitation work carried out by MSSRF for the betterment of coastal villages is tremendous. As I understand, this Centre has been instrumental in conserving and rehabilitating marine life. The dedication of the Centre in transforming the lives of fishers is highly commendable. I wish Fish for All Centre continued success in all its endeavours.



Prof. P Anantharaman

Dean, Faculty of Marine Sciences, Centre of Advanced Study in Marine Biology, Annamalai University, Chidambaram

Acknowledgment

The year 2023 was a pivotal one for the Fish for All Centre – a year of transformation and rewards. In this Annual Report, we have highlighted the process and progress we made in implementing our programmes for the year 2023 to achieve the Sustainable Development Goals 1, 2 & 14 and defeat the Ocean Decade Challenge 1, 2, 5,6 & 9. The 14-year-long journey of the Fish for All Centre programme has been filled with challenges, understanding, learning, and growing, and we are sure this would not have been possible without the community, government and organisations that partnered, guided and supported us in various capacities.

As we enter into the 15th Year of Fish for All Centre, we take this opportunity to pay our gratitude to all these pillars of support. I record my sincere thanks to all our donors INCOIS-MoES, Qualcomm Wireless Reach, NABARD, ICAR-NBFGR, UNDP-SGP, Department of Science and Technology, National Fisheries Development Board (NFDB), Reliance Foundation and USAID without which this work would not be possible.

We are grateful to our Chairperson Dr Soumya Swaminathan for her continuous encouragement and generous support for the Centre to help grow to greater heights of scientific excellence and social relevance. We also wish to express our sincere thanks to our Executive Director (Research) Dr G.N. Hariharan for his timely advice, and guidance and Mr Sriniraman, Executive Director (Strategy) for his continued support. We would also like to thank our senior Fellow Dr Ramasubramaniam, senior Directors Dr Rengalakhmi, Dr Prabavathi and Director Dr Oliver King for their support and guidance for the various stages of our centre growth.

I thank all my team members of the Fish for All Centre, for their teamwork, hard work, commitment and continuous engagement with the community and partners towards its success. My appreciation are to my colleagues Dr Priyanga, Ms Anbuvaahini and Ms Sangeetha for their timely support to collate all the data and content to prepare this report.

Last but not least, we wish to thank every single fishers part of our programme for letting us know their needs, feedback and success stories. The Centre would mean nothing without the fishing community at large. We believe the journey of Fish for All Centre has just begun and there are a lot more lives to be touched and many more fisher friends to be made in the coming year.

Dr. S. Velvizhi

Head, Fish for All Centre, MSSRF





Executive Summary

The MSSRF Fish for All Research and Training Centre in Poompuhar, Mayiladuthurai district, Tamil Nadu, was established with the support of the Tata Trusts in 2009 and is now marking the completion of its 14th year of operation. This Centre is a post-tsunami initiative that emerged as a platform for multi-stakeholders driving practical actions and advocacy to shape public policy. The Centre's 14-year journey testifies to the dedicated collaboration of communities, government, and stakeholders in advancing sustainable fisheries and simultaneously enhancing the livelihoods of the small-scale fishers and tribal families.

Key highlights for the year 2023

The Fish for All Research and Training Centre (FRTC) initiatives and programs have received recognition at various levels, which has facilitated the expansion of our services to 2,63,704 fishing and tribal households with an addition of 18,493 fishing and tribal households this year.

The Fish for All Centre was awarded the 'Women Connect Challenge', India (WCC)

Award grant by the Reliance Foundation and the United States Agency for International Development (USAID) on 28th September 2023. The Centre has planned to use this grant to develop a range of Information and Communication Technologies (ICT) aimed at reducing the gender digital divide in fisheries sector. The Centre believes that these ICT interventions will empower women in the fishing community by providing them with access to information, knowledge, skills and linkages that will enable them to participate more effectively in the fisheries sector.

Fish for All Centre is deeply committed to minimize the impact of pollution in marine ecosystems. The Centre is actively involved at ground level action with the fishing community through a Community-Centric Collective Approach to minimize the impact of ghost gears to conserve marine biodiversity. This year 1554 kg of marine debris including 616 kg of ghost gear was collected from the Tamil Nadu coast by involving 206 volunteers from Ramanathapuram and Mayiladuthurai districts.

The Fisher Friend Mobile Application (FFMA),

the flagship programme of the Centre is designed to offer shore-to-shore needs of the fishing community has successfully achieved the milestone of reaching out to one lakh fishers with a total user of 1,10,751. The latest version of Fisher Friend 5.4 introduces the India-Bangladesh International Maritime Boundary Line (IMBL) Alert feature, providing a crucial 5 km warning ahead of Bangladesh's IMBL waters to enhance the safety of Indian fishermen. The application has garnered a total screen view of 150.24 lakhs.

A New Wave Rider Buoy MK III was successfully deployed in the Tuticorin coastal waters, near Kosuvari Island—just 13 km from the Tharuvaikulam fishing harbour in collaboration with INCOIS on 24th November 2023. This buoy is now actively transmitting real-time data on wave height, wave length, and sea surface temperature to both INCOIS and the High Frequency Shore Station, significantly reinforcing the monitoring capabilities in the area.

A new study on shoreline observation has been initiated on nine beaches (Velankanni, North Poigainallur, South Poigainallur, Vellakoil, Perumalpettai, North Perumalpettai, Samiyarpettai, Kumarapettai, Madavapallam) of three districts including Nagapattinam, Mayiladuthurai and Cuddalore of Tamil Nadu to study the dynamic beach processes and the effect of wave, current and anthropogenic structures on a beach.

The Fish for All Centre (FRTC) conducted 218 structured training programmes benefiting 7483 (4957 men and 2526 women) fisherfolk, farmers and students on various themes.

Digital literacy for fisherwomen was launched during this year in six coastal districts (Mayiladuthurai, Nagapattinam, Cuddalore, Ramanathapuram in Tamil Nadu and Karaikal and Puducherry in Puducherry Union Territory), wherein 1924 fisherwomen were trained on accessing mobile phones, using internets, online transactions along with cyber harm and cyber security.

An exclusive audio advisory service was launched for fisherwomen to disseminate information and knowledge on post-harvest processing, drying, value addition, quality control, marketing, and government welfare schemes. It is an initiative designed to bridge the digital divide and strengthen the socio-economic resilience of fisherwomen. Tailored for 1200 registered women within 100 self-help groups (SHGs), the thrice-weekly advisories not only enhance the accessibility but also addresses the specific challenges faced by fisherwomen.

The impact of the Centre's initiatives extended to 8,462 fishers, fish farmers, and tribal families, significantly influencing their daily lives. Particularly, a sample of 35 fishermen experienced an income benefit of 27.04 lakhs, 55 fisherwomen gained 2.87 lakhs, and 15 tribal families saw an increase of Rs. 88,115 during the year.

Fish for All Centre was recognised as a "Cluster Based Business Organization" by the National Fisheries Development Board (NFDB), Ministry of Fisheries, Government of India through which Fish Farmer's Producer Organizations (FFPOs) in Tamil Nadu and Puducherry are promoted.

We facilitated and nurtured three Fish Farmers Producer Organization (FFPO) in Tamil Nadu and Puducherry state with a total membership of 220 fisherfolks under the Pradhan Mantri Matsya Sampadha Yojana (PMMSY) scheme of the Government of India.

The Centre organised a Virtual Career Guidance Programme aimed at the children of fisherfolks residing in Tamil Nadu and Puducherry on 26th May 2023. Over 200 students from eight coastal districts attended the programme and benefited from the knowledge imparted by subject experts from various universities and government departments.

The Fish for All Centre team has organized nineteen guest lectures for the year, both in the national and international forums by inviting experts to share their knowledge on varied fisheries related subjects to schools, colleges,

Government departments, fishers and farmers network

A Memorandum of Understanding (MoU) was signed with ICAR-CIBA, Chennai for undertaking joint research for the development and validation of brackish water aquaculture technologies.

Another MoU was signed with WorldFish, Malaysia for a short term consultancy on the survey of Characterization of Tilapia Fish Farmers in India.

Communication and outreach were carried out through multiple engagement efforts, interactions, and platforms. During the year, new social media handles (Twitter (X), Facebook and Instagram) were developed for Fish for All Centre to reach out to multiple stakeholders



1. Genesis of the Programme

December, 26, 2004 was the most distressful day in the modern history of human lives that saw a natural calamity of huge proportion in the Indian Ocean region. The earthquake that struck on that day with an estimated magnitude of 9.1 Richter scale in the Sumatran region caused the strongest tsunami since March 28, 1964. According to the National Centre for Environmental Statistics 2, 27,898 people were killed or listed as missing and presumed dead by the Indian Ocean tsunami. Devastation was massive as waves measuring 10-40 feet high struck the shores and surged up beaches, buildings, and entire villages before waning back into the ocean. All the 13 coastal districts of Tamil Nadu were affected, but the worst losses were recorded in Nagapattinam where 6,065 people were killed. An estimated 85% of people affected by tsunami were from the fishing community, leaving them in shock, fear and trauma, struggling to adapt to

the post-tsunami situation and rebuild their livelihoods. Ever since the devastating event, disaster risk reduction and preparedness became part of the development plans and policies of almost all coastal nations of the Indian Ocean coast.

The M.S. Swaminathan Research Foundation (MSSRF), in response to the disaster had undertaken a range of field level activities to build the resilience of the coastal communities in Tamil Nadu, Puducherry and Andhra Pradesh. With funding support from the Tata Trusts, MSSRF, inaugurated a community research and training centre 'Fish for All Research and Training Centre' in Poompuhar, Mayiladuthurai district of Tamil Nadu on December 26, 2009 with the purpose of spearheading a coordinated effort in promoting sustainable development practices.



2. Fish For All Research And Training Centre (FRTC)

This Centre was conceptualized based on the felt needs expressed during the post-tsunami interactions with the coastal communities towards addressing a long-term strategy to bring a collective and holistic approach in fish resource management, sustainable livelihood options, disaster preparedness and management. This Centre functions as training cum demonstration space, to strengthen and diversify livelihoods and identify alternative economic activity for coastal communities to add value to the process chain- capture/ culture, commercialization and consumption- by adopting a participatory approach involving all the associated stakeholders and institutions.

The Centre's main focus is taking appropriate actions to build the adaptive capacity of fishers and make them resilient to the changing climate. This is carried out through participatory research, creating awareness on adaptation, importance of sustainable fishing and environmental practices; diversifying livelihood options; evolving a network of fishers for strengthening the coastal and marine biodiversity; enabling access to key relevant and real time based scientific information; and providing early warning

alerts by using affordable and energy efficient communication technologies, besides working towards enhanced security in maritime borderline, risk zones and safeguarding coastal and marine biodiversity.





3. Broad Objectives of the Fish For All Centre

The broad objectives of the FRTC are:

- To evolve a management model of livelihoods and wherever possible increase the long term productivity of fisheries and aquaculture through sustainable use of aquatic resources and application of environmentally sound technologies
- To assess the vulnerability and enhance adaptive capacity to climate change in coastal fisheries
- To ensure adoption of responsible and sustainable fishery practices marine fisheries and introducing a code of conduct for this purpose
- To develop social marketing techniques, to ensure availability of good quality aquatic products to consumers, thus helping both resource-poor producers and resource-poor consumers through self-help groups
- To strengthen food security of rural poor and their socio-economic development through improved access of fish products to domestic, regional and international markets

- To enable a self-replicating process by developing community organizations capable of tapping both internal and external resources and for advocating their own agenda relating to regional issues, capacity building, financial and credit management

The Centre applies various adaptive measures to build resilience of coastal communities through its projects and programmes focusing on four major thematic areas -

1. **Capture fisheries resource management and enhancement**
2. **Post-harvesting technologies and livelihood promotion**
3. **Culture fisheries resource management and enhancement**
4. **Training, Capacity building and Outreach**

Gender, ICT and climate change are cross cutting themes to implement the interventions of the Centre. The Centre follows a multi-stakeholder approach to achieve its mandate in planning, implementation and monitoring of the programme. The role of stakeholders in fisheries management and implementation of activities at the community level is significant

as they play an important part in the whole process. Stakeholders in coastal communities include fishers, their families and households, boat owners, fish traders, community-based groups, seasonal or part-time fishers, local business owners, local traditional authorities, elected government officials, representatives of government agencies, non-government organizations, financial institutions etc.

The key strategies to be followed to achieve the plan includes -

- Community mobilization and promotion of gender-balanced grass root institutions
- Enhance knowledge, and skills and bring changes in attitude and behaviour through training, capacity building and demonstration
- Technology support and Incubation: Techniques or interventions which are easily adaptable by the stakeholders would be identified, initiated and de-mystified
- Participatory research, action and monitoring with stakeholders
- Networking and sharing of resources for sustainable livelihoods and management of resources
- Communication and Policy Advocacy





4. Progress and achievement during the year 2023

4.1. Marine Fisheries Resource Enhancement and Management

4.1.1 Fisher Friend Mobile Application (FFMA)

The Fisher Friend Mobile Application, a flagship programme of the Centre has experienced a positive growth with 8213 new users, bringing the overall user count to 1,01,751. Additionally, the total screen views for the year is 21.4 lakh increasing the overall screen view to 150.24 lakhs reflecting substantial engagement and utilisation by the fishing community. Two customized new versions of the FFMA (5.4) were released via Google Play Store, with newly added features of India and Bangladesh International Maritime Border Line (IMBL) Alert. Through this feature, our Indian fishermen are warned by an alert 5 km ahead of the IMBL waters of Bangladesh. This feature is available for fishermen who have registered from West Bengal and Odisha states. The communication portal of the FFMA application was upgraded.

Promotion and Scaling up of Fisher Friend Mobile Application: 109 village-wise promotional meetings and mass campaigns were conducted to provide orientation on the

benefits of FFMA from five coastal states. 8,213 fishers were newly registered into the FFMA application, bringing the overall registered users to 1,01,751.

Stakeholders Consultation on Evolving strategies for Sustainability of Fisher Friend Mobile Application at Kakinada in Andhra Pradesh state: 18 primary and secondary stakeholders participated from the State Institute of Fisheries Technology (SIFT) in Kakinada. The AD Fisheries from SIFT, AD and FDOs from the Fisheries Department, Coast Guard Assistant Commandants, SI of the Coastal Security Police, Degree College faculty from the Department of Fisheries, boat owners and members from FM Radio and private institutions jointly evolved a road map for FFMA sustainability.

Role of Fisher Friend Mobile Application During Disasters: FFMA disseminated more than continuous messages to the fishers on the movement of the Michaung cyclone through its disaster alert features based on the cyclone bulletin from the INCOIS-Indian Meteorological Department, which supported fishers to take appropriate precautionary measures. More than 12 such alerts were disseminated, High FFMA app use was noted, with 65,585 views,

recorded in seven days in cyclone-crossing districts. Disaster alert and facilitation by the team via the helpline addressed 440 queries to safely reach the vessels in the particular landing centre without loss of livelihood assets.

Benefits Realized by Fishers from Fisher Friend Mobile Application: A sample of 35 fishers among the FFMA users have reported a noticeable benefit amounting to 27.04 lakhs. This includes Rs.15.80 lakhs as increased income and Rs.11.24 lakhs dedicated to the protection of livelihood assets.

4.1.2 Ocean observatory system for measurement of real-time ocean state data

The Centre is a network partner of the Indian National Centre for Ocean Information Services (INCOIS), based at Hyderabad to manage and monitor ocean observation tools (Wave Rider Buoys (WRB), Automatic Weather Station) deployed in the coastal areas of Tamil Nadu and Puducherry to collect real-time information on ocean status. FRTC has established shore stations with all required facilities in three districts of Tamil Nadu and Puducherry (Panithittu- Puducherry, Muttom-Kanyakumari and Tharuvaikulam - Tuticorin), and it is being monitored round the clock to record real-time critical ocean parameters

Wave Rider Buoy measure wave characteristics, sea temperature thereby providing critical data for oceanographic analysis. The information aids in forecasting severe weather events and improving warnings for high waves, tsunamis, and cyclones. On November 24, 2023, a New Wave Rider Buoy MK III in Tuticorin coastal waters, near Kosuwari Island—just 13km from Tharuvaikulam fishing harbour was successfully deployed. This buoy is now actively transmitting real-time data on wave height, wave length, and sea surface temperature to both INCOIS and the HF station, significantly reinforcing the monitoring capabilities in the area.

4.1.3 Promotion of ocean forecast and marine fishery advisory services:

Active fisherfolk in the selected villages were identified and equipped with the necessary capacity to understand the significance of INCOIS services such as Ocean State Forecast (OSF), Potential Fishing Zone (PFZ) and Tuna forecast services. During the reporting period, a total of 22 village awareness programmes and two state-level mega awareness programmes were conducted in which 1675 fishers from 24 fishing villages participated.

Workshops	January to December 2023	Villages/districts Covered	Total Participants
State level Workshops	2	84 villages/ 11 districts	1069 (Male - 1021 and Female - 48)
Village awareness programme	22	24	606 (Male - 487, Female - 119)

INCOIS services such as Ocean State forecast, High wave and wind alert, cyclone warnings and Potential Fishing Zone are being disseminated to the fisher-folk using several Information Communication Technologies such as Text and Voice messages, Fisher Friend Mobile Application, Multilingual Helplines, Notice boards, Public Address system, FM radio, Community Radio etc., which enabled fishers to make correct decisions in critical situations to improve their livelihood and ensure safety at the sea. The database of all the users is maintained separately.



ICT Tools	Existing Users (up to March)	New users (Jan to Dec 7 th 2023)	Total Users
FFMA	86600	8213	94813
Audio advisories	2849	407	3256
Helpline	1347	614	1961
WhatsApp's	717	216	933

4.1.4 Beach Profiling and Littoral Environment Observation

A study on beach profiling and Littoral Environmental Observation (LEO) has been initiated in nine stations of three selected beaches (Velankanni, North Poigainallur, South Poigainallur, Vellakoil, Perumalpettai, North Perumalpettai, Samiyarpettai, Kumarapettai, Madavapallam) of three districts including Nagapattinam, Mayiladuthurai and Cuddalore in Tamil Nadu to study the dynamic beach processes and the effect of wave, current and anthropogenic structures on a beach. To profile the beach and observe littoral environment, soil samples are collected for analysis over a period of six months from nine stations at regular intervals.

4.2 Action towards Minimizing the Impact of Ghost Gears

The initiative to minimise the impact of ghost gears to conserve the biodiversity of Gulf of Mannar and Palk Bay region through the Community-Centric Collective Approach have been initiated jointly local fishers, boat owners, fishermen associations, and coastal panchayat members. This initiative aims to recover abandoned, discarded and lost fishing gear in challenging marine environment with the guidelines of voluntary commitment from the community. The programme also intends to establish a voluntary code of practice on ghost gear management for continued action. The initiative seeks to protect and rehabilitate five islands coast/shore regions from the ill effects of ghost gears through community



participation, action, and management and also aims to innovate and demonstrate the use of ghost net art as means of alerting the public to the damage that ghost nets inflict on the marine environment.

FRTC has collected 5.8 tons of marine debris with the support of 724 volunteers across Ramanathapuram and Mayiladuthurai coast. This year with the help of 215 dedicated fisher volunteers 2.85 tons of marine debris including 1.83 tons of ghost gears and the remaining consisted of various plastic items glass bottles, footwear, and other plastic items. To motivate youth to continue the process with MSSRF guidance, ghost gears retrieval materials such as spades, rakes, and combs were distributed to identified volunteers to continue this ghost gear drive through collective action.

The shoreline drives were a great success in terms of raising awareness about the importance of responsible fishing practices and the need to mitigate the impact of ghost gears. As part of this effort, 230 fishers from 15 fishing villages and 12 associations were trained on ghost gear management through

four highly informative workshops that were conducted at Thangachimadam, Pamban, Rameshwaram, and Mandapam. During these workshops, scientists from the Central Marine Fisheries Research Institute (CMFRI), National Centre for Coastal Research (NCCR), and the fisheries department provided valuable insights into the impact of ghost gear and its management. The training was a resounding success in terms of raising awareness and providing effective preventive measures to combat the negative effects of ghost gears and different types of marine litter on marine ecosystems.

4.3 Post- Harvest Fisheries Management and Livelihood Promotion

4.3.1 ICT for Strengthening Post Harvest Value Chain

Fish for All Centre is one of the seven social sector organizations to have bagged the 'Women Connect Challenge' (WCC) grant from Reliance Foundation and USAID amongst 260 applications received across India. Under this programme, Fish for All Research and Training Centre has decided to develop a range of Information and Communication Technologies (ICT) to reduce the gender digital divide among fisherwomen. The aim is to enhance their knowledge of digital literacy, post-harvest management and mobility in enterprise development that further contributes to gender equality and women's empowerment in the fisheries sector. The project, launched on August 8, 2023, targets to benefit 6000 fisherwomen across 100 villages

in Nagapattinam, Mayiladuthurai, Cuddalore, and Ramanathapuram, including Puducherry and Karaikal. MSSRF Chairperson Dr. Soumya Swaminathan inaugurated the initiative on the MSSRF's Foundation Day celebration during the International Conference on Mighty Millets for Food, Nutrition, and Health Security held in Chennai.

4.3.2 Fish Product Development and Promotion

Women Self-Help Groups (SHGs) in the regions of Mayiladuthurai and Cuddalore, underwent training on hygienic preparation of value-added nutritional fish products using pelagic fishes.

A specific women's group Nakshatra took the lead in initiating the production and marketing of these value-added products, subsequently generating income starting from January 2023. To bolster product visibility, an attractive label with FSSAI standards was created for all the products, and promotional efforts were made through both government and private channels. Additionally, an online marketing presence was established through a dedicated WhatsApp business profile for promoting and selling these products

Also, a linkage has been established through the District Industries Centre for marketing and promotion of the products in the district. The women groups have processed 3162 kg of fresh fish and produced 1054 kg of dry fish and generated an income of Rs. 2,48,268/- through the sales of dry fish. Value added products like anchovy idli powder (20 kg), sambal (17 kg), tomato anchovy thokku (20 kg), prawn pickle (2.5 kg), masala powder (10 kg) were processed in the centre through SHG women and sold for value of Rs. 35,784/-. As part of the institute's



entrepreneurship training program targeting fisherwomen, value-addition training was extended to women from Kerala, Andhra Pradesh, and various coastal areas of Tamil Nadu. Comprehensive training sessions covering costing and marketing strategies were conducted for fisherwomen engaged in the production of value-added goods

4.3.3 Market Linkages for commercialization of fish products

The marketing linkage for women engaged in post-harvest fisheries focuses on commercializing their fish products through supermarkets, including efforts to on board products on platforms like Flipkart and Walmart. While the GST registration is currently in progress, once completed, it will further enhance the formalization of their business operations with chain-linked supermarkets and online sales portals for sustainable product sales. This comprehensive approach aims to empower women in the fisheries sector by providing them with access to wider

markets and ensuring a sustainable and formalized presence in the retail landscape.

4.3.4 Study on nutrient profiling and dry curve analysis

A study was undertaken to investigate the seasonality of dry fish production and the types of fish commonly dried in this region. Additionally, nutritional analyses were conducted to profile commonly available dry fish species like Anchovy (*Stolephorus* spp.), Rainbow Sardines (*Dussumieria acuta*), Silver belly (*Leiognathus insidator*), Croaker (*Kathala axillaris*), Ribbon fish (*Lepturacanthus savala*) and Scads (*Alepes apercna*). The study involved examining the drying curves of different fish species to comprehend the duration required for solar and sun drying methods. Stability assessments of dry fish from solar drier revealed a shelf life of one year, a significant improvement compared to the commercially available dried fish which typically have a shelf life of one to two months.

4.4 Culture Fisheries and Resource Enhancement

4.4.1 Integrated Mangrove Aquaculture

The Integrated Mangrove Fishery Farming System, implemented in the Vellar-Coleroon estuarine complex, has proven successful in bolstering the adaptive capacity of fishers to rising sea levels in Cuddalore district. During the reporting period, rearing of seabass in cages, quarantined fattening of mud crabs was undertaken. Further linkages were established for purchase of seabass fingerlings, water crabs and sales of fish and



fattened crabs. 113.9 kg of shell and fin fish were harvested, generating a substantial income of Rs. 88,115/- for the group members. A disease outbreak in IMA, Mudasalodai affected the overall growth of the seabass cultured in the farm. Infection diagnosis revealed the prevalence of *Photobacterium damsela* subsp. *piscicida* gram negative bacteria which caused 26% mortality in cage reared seabass. This affected the overall output of the culture and reduced the expected yield of fish from 80% to 66.4%. The livelihood groups were taken to Kottaikadu seabass nursery run by women SHG's promoted by ICAR- Central Institute for Brackishwater Aquaculture. A new crab fattening unit of size 30x30 was established to empower 15 tribal families of Kalaingar Nagar with the support of ICAR- NBFGR under its Tribal Sub Plan Scheme. This venture holds the potential to uplift the socio-economic conditions of the community by providing them with a sustainable source of income.

On July 25, 2023, the FRTC organized a stakeholder consultation in Pichavaram. This

event aimed to promote the adoption and replication of the Integrated Mangrove Fishery Farming System in surrounding fishing villages. The consultation drew the participation of 100 individuals, including representatives from the forest department, academic institutions, and traditional village panchayat leaders.

4.4.2 CARP fish Culture

In September 2023, a trial of common carp breeding was conducted at the Portable Carp Hatchery, employing induced breeding techniques in common carp (*Ciprinus carpio*). The results were notably successful, yielding a substantial number of fingerlings. Currently, these fingerlings are being carefully maintained in nursery tanks. The objective behind this initiative is to facilitate the distribution of these healthy fingerlings to farmers, contributing to the enhancement of local aquaculture. This not only underscores the viability of the breeding program but also emphasizes the potential positive impact on the broader community. Front line demonstration has been conducted on the significance of rearing stunted fish fingerlings. A total of 19 farmers from Kidaramkondan village, Mayiladuthurai district participated in the event.



In the year 2023, the Center successfully organized a total of 218 training sessions, contributing significantly to the increase of knowledge and skill among 5723 individuals. This inclusive initiative reached out to 3331 males and 2392 females, creating a massive impact on the fishing community. The diverse array of training programs included -

- a. **Ghost Gear Management:** Four training programmes focusing on ghost gear management, issues and preventive measures to create awareness and promote sustainable fishing practices among the fishers were conducted. A total of 230 fishers have been enlightened through these training programs from the region of Thangachimadam, Pamban, Mandapam, Rameshwaram. This initiative not only raised awareness about marine litter but also equipped participants with practical measures.
- b. **Ghost Gear Upcycling Training Workshop:** In collaboration with WWF

4.5 Capacity Building Program and Outreach

4.5.1 Training and Awareness Programmes:

The Fish for Research and Training Centre has been actively involved in implementing a diverse range of training programs and conducting extensive awareness campaigns.

India, the Centre conducted a 15-day training workshops between May 30th to 15th June 2023 to engage 65 fisherwomen from the fisher communities in the Poompuhar and Ramanathapuram region to learn the craft of weaving on a lap loom to upcycle ghost net. They have learnt design thinking, elements and principles of weaving techniques, and product development with ghost gears. They have created products like wall hangings, table mats, coasters from the ghost gears and generated income of Rs. 3840/- This is the new way of approach to address the effects of marine debris. The trained women were inspired and motivated to train others from the community to carry on this work.

- c. CARP culture and its breeding and feeding management:** Six training programs focused on the culture of Indian Major Carps were conducted, covering breeding methods and feed management. 81 male and 62 female participants gained insights into sustainable practices of carp culture. The impacts include improved knowledge in Carp culture, enhanced breeding techniques awareness, and heightened understanding of feeding strategies for Indian Major Carps. Fifteen participants were taken on an exposure visit to Tripuls Integrated Aqua farms, Pudupattinam.
- d. Seabass Nursery and Cage Farming:** A one-day training workshop focusing on the different culture methods of Seabass and its disease management was organized. A total of 43 participants including 23 males and 20 females



participated in the training program. The participants gained knowledge on rearing of seabass, its diseases management and the best management practices to be adopted for culturing of seabass. Five males and ten females were taken for an exposure visit to sea bass nursery and cage farming at Kottikadau, Marakanam.

- e. Disease Management in Mud Crabs:** Frequent mass mortalities of mud crabs during crab fattening due to reo virus infection in the region needed to be addressed. So to address this challenge a training was conducted covering prevention strategies and effective management practices. A total of 23 participants with 6 males and 17 females gained insights through this training program.
- f. Post-harvest Management:** Seven training programs, covering hygienic dry fish production, fish value addition, costing, entrepreneurial skills, online

marketing, and credit management were conducted. A total of 184 participants benefited from these programmes, enhancing their expertise in various aspects of the post-harvest management.

g. Fisher Friend Mobile Application (FFMA):

3069 fishers have been oriented through 122 training programs. The participants were trained on the usage of the application and its features that offers shore to shore need of the fishing community to perform fishing safely.

h. Digital Literacy & skill development Training:

1924 fisherwomen involved in post-harvest fisheries have been trained through 73 training programs. The training program focusses on enhancing the skill of fisherwomen in accessing digital tools. The participants were trained on internet, search engines, WhatsApp business, UPI payments. Further they are also made aware of the cybercrime and cyber safety.

i. Training Programme on Business Planning for FFPO:

A total of two training programmes was organised for the Board of Directors and lead farmers of all the three FFPO. 42 participants including 35 males and 7 females gained insights into business planning for the respective FFPOs.

j. Onboard trails on CIFT-NoAA-TED:

Two-day onboard trials on the modified Turtle Excluder Device (TED) were organised in the Mandapam coastal waters involving the shrimp trawlers and fishers in Mandapam and Rameshwaram region. The field trails are a joint effort by the



Central Institute of Fisheries Technology (CIFT), Cochin, and the MSSRF Fish for All Research and Training Centre with the support of the Fisheries Department, Mandapam, Government of Tamil Nadu. During the trials, two identical shrimp trawlers were engaged. One trawler was equipped with new TED in the cod end and other trawler acted as a control boat. This was done to understand the catch variations during the trials

k. Data collection methods and tools for Enumerators:

The Fish for All Centre in collaboration with WorldFish conducted a comprehensive survey on the Characterization Study of Tilapia Fish Farmers in India. The survey aims to gather detailed information on the socio-economic details, practices, challenges, and opportunities faced by Tilapia fish farmers in selected states. To ensure the successful execution of the survey, a one-day training workshop was conducted on survey methods and

tools for the enumerators and state coordinators from the selected states of Tamil Nadu, Kerala and Chhattisgarh. Two enumerator workshops were held, covering three states. The first one took place at Kochi, Kerala, on November 28, 2023. The subsequent workshop occurred on December 14, 2023, at Raipur, Chhattisgarh. 27 participants were benefitted from the workshop

Training Centre Registration under PMFME

Scheme: Fish for All Research and Training Centre has been registered as Private Training partner through State Nodal Agency under the Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME) scheme. Training activities forms the pivotal component of this scheme encompassing group and individual trainings. The Center's involvement as registered private training partner focuses on enhancing the skill and knowledge of individuals, institutions, and Self- help groups.

4.5.2 Village Knowledge Centre and Village Resources Centres:

VRC & VKC of Fish for All Centre in Panithittu, Puducherry, Poompuhar, and Thangachimdam have been directly accessed by 1429 users, comprising 825 males and 604 females to gain insights into Fisheries, Education, Health, Employment, Computer training, Aquaculture, Animal husbandry, Government online applications, Training, and Government-related information. 3729 helpline queries were effectively addressed, covering OSF, FFMA, marine conservation, sea safety measures,



and linkages with the fisheries capacity training programme. 188 audio advisories on ocean state forecasts were developed and disseminated across Puducherry, Ramanathapuram, Tuticorin, Nagapattinam, and Mayiladuthurai districts in Tamil Nadu. 2094 fisher folks received key information, significantly influencing their decisions to venture into the sea.

Moreover, a Career Guidance program that focused on Marine, Coastal, and Fisheries-related courses was held, which attracted 24 on-site participants and engaged over 130 students virtually. In total, 154 students participated in the program from seven districts of Tamil Nadu. The main objective of this program was to provide insights into potential career paths and educational opportunities in these fields.

Python Basics for the students: Between the 16th of March and the 31st of March, a comprehensive workshop on Python basics was organized, with 22 students enrolled

to participate. The workshop lasted for 14 days, and during this time, the students were introduced to the fundamental concepts of the Python programming language. The course was designed to be practical and interactive, with hands-on exercises and activities to enhance learning. At the end of the workshop, a pre and post-test were conducted to assess the students' understanding of Python basics. Of the 22 students who enrolled in the workshop, 17 successfully completed the pre and post-test. This indicates that the participants have gained a thorough understanding of Python's fundamental concepts and are well-equipped to apply this knowledge in real-life programming scenarios.

Virtual Career guidance programme for students: Fish for All VRC organised a Virtual Career Guidance Programme aimed at the children of fisherfolk residing in Tamil Nadu and Puducherry on 26th May 2023. The initiative focused on providing career guidance to high school students from 11th and 12th classes, encouraging them to pursue higher education in marine and fisheries studies at both government and private institutions. Over 200 students from eight coastal districts benefited from the valuable insights of subject experts from the University and Indian Coast Guard.

4.6 Promotion of Fish Farmer Producer Organization for Collective Action

Fish for All Centre has been awarded as Cluster Based Business Organization (CBBO) under PMMSY scheme of Ministry of Fisheries, Government of India for the promotion of three Fish Farmer Producer Organizations in Tamil



Nadu and Puducherry UT. The CBBO office has been set up at Fish for All Centre to facilitate the fishers and fish farmers on FFPOs formation and promotion. Base line survey, stakeholders meeting, cluster finalization, formation of farmer interest groups and farmers interest group meetings were implemented through the CBBO in the selected clusters. An exposure visits to Nallavur Farmer Producer Company Ltd, Villupuram district, Tamil Nadu and Central Institute of Fisheries Technology, Kochi, Kerala was organised for the Board of Directors (BoD) of two FFPOs promoted by the Centre.

With the facilitation of Fish for All Centre, three FFPOs namely (i) Bharathidasan Freshwater Fish Farmers Producer Company Limited, Puducherry (ii) VetriPavai Fisherwomen Producer Company Limited (iii) Mayiladuthurai Kaveri Fish Farmers Producer Company Limited were formed and registered under the Company Registration Act.

- The Puducherry FFPO, with 126 shareholders from 15 villages, convened

its annual general body meeting on December 12, 2023, in Puducherry. Extensive awareness programs spanned over 15 villages, accompanied by Board of Directors and Business planning meetings. The FFPO's business plan encompasses dry fish sales, fish feed manufacturing, and fish fry marketing.

- VetriPaavai Fisherwomen Producer Company was promoted and registered with 41 fisherwomen involved in Post-harvest fisheries from Mayiladuthurai and Nagapattinam block to overcome the constraints they face and tap the potential of small-scale fishers particularly women fishers.

Collectivization of fish producers, especially small and vulnerable fisher women into producer organisation has emerged as one of the most effective pathways to address the challenges most importantly, improved access to investments, technology inputs and market opportunity. The promotion of Fisherwomen Producer Organization (FFPO) aims to increase the income of marginalized and underprivileged fisher women by facilitating production, processing, and marketing strategies. Linkage has been established with the District Industries Centre to avail loan with 35% subsidy for women under the Pradhan Mantri Formalisation of Micro Food Processing Enterprises (PMFME). So far, 65 women have been approved for a loan Rs.1,00,000 each.

(iii) Mayiladuthurai Kaveri Fish Farmers Producer Company Limited, established in the Mayiladuthurai district, comprises of 53 shareholders from the Sirkazhi and



Sembanarkovil cluster. Mirroring the approach in Puducherry, the FFPO has conducted awareness programs, Board of Directors meetings, and Business planning meetings across over different villages of Mayiladuthurai district. The planned business activities encompass dry fish sales, fish feed manufacturing, and fish fry marketing.

4.7 Every Child A Scientist Program

The ECAS programme at the Fish for All Centre was inaugurated by the Hon'ble Minister for Environment and Climate Change Thiru Siva V. Meiyyanathan, via video conferencing in August 2022. During this year, ten government schools within a 15 km radius of FRTC have been included in ECAS with permission from the District Education Office. Each batch has a scheduled 15 day programme with 25 students (Grade VI to VIII) per batch. In this year, 281 students (120 boys and 161 girls) in eleven batches attended the ECAS training sessions and certificates were distributed. In addition to the modules based on school syllabus, new



modules focusing on locale-specific practical concepts (e.g., fish and fisheries, fish processing, etc.) are being developed. Students had the chance to interact with experts from ICAR – NBFGR, INCOIS, District Education Office and TATA group of Companies. On National Science Day, 35 students received Thirukkural books. Additionally, a teacher’s workshop at FRTC saw the participation of 20 teachers from Vanavil Mandram.

4.7.1 Tuition services for Science and Maths education

Since January 21, 2023, tuition services have been introduced at the Fish for All Centre, benefiting 20 students from the Panchayat Union Middle School (6th to 8th standard) in Poompuhar fishing village. Given that many families lack literate parents, the focus of the tuition service is on mathematics and sciences. Students actively utilize this support system to clarify doubts and enhance their academic understanding.

4.8 Students Internship and Exposure Learning:

More than 565 school and college students from across Tamil Nadu, West Bengal visited the Fish for All Centre during the year. During the visit a short PPT about Fish for All Centre activities was screened, with detailing other activities of MSSRF. Students also visited the fish processing unit, portable hatchery, solar units, integrated fish farming system, artificial reef system, every child a scientist laboratory. The students had an opportunity to have a hands on experience on baseline data surveys, its methodology and compilation. Furthermore, they actively participated in the mass promotion of FFMA. A student who is doing her BBA in Fisheries did her one-month Rural Agricultural Work Experiences (RAWEX) project at the FRTC focussing on understanding the marketing strategies adopted by the women SHGs promoted by FRTC.



4.9 Grooming Community members as local experts

The Centre has taken several initiatives to motivate, train and recognise the socially committed local youths, women and men fishers and encouraged them to excel in their field through meetings, exposure, continuous engagement and motivation.

- I. **NVA fellows:** The Centre has closely worked with 28 National Virtual Academy Fellows (NVA fellows) in the coastal region and taken their expertise for strengthening the ongoing activities of the Centre. They have been invited for various meetings and programmes of the Centre to share their expertise and knowledge.
- II. **FFMA Ambassadors:** The Centre promoted 110 Ambassadors under Fisher Friend project to promote the usage of FFMA in the respective regions.
- III. **Master Trainers:** 80 Master trainers have been promoted under for disseminating the ocean based knowledge and information to fellow fishers.
- IV. **Ghost Gear Volunteers:** 45 fisher volunteers promoted have started volunteering for the retrieval of ghost gears from the Gulf of Mannar region. Post the training and shoreline drives, now they have started the retrieval process by themselves with the retrieval materials distributed to the appropriate end users.



4.10 Exposure visit of farmers, fishers and other stakeholders

- a. **Exposure visits of Kerala Fisher women to Fish for All Centre for Training on Fish Processing:** A group of 19 fisherwomen from Kerala visited the Centre for a two days training program on Postharvest management, Fish Processing, hygienic dry fish production and its value addition during 2nd and 3rd March 2023
- b. **Exposure Visit of Yuva Sangam to Fish for All Centre Yuva Sangam,** an initiative of Ek Bharat Shreshtha Bharat aims to strengthen people- to- people connect and build empathy among youth across the nation. This exposure tour will provide an immersive, multidimensional experience under five broad areas: Paryatan (Tourism), Parampara (Traditions), Pragati (Development), Prodyogik (Technology) and Paraspar Sampark (People-to-people connect). As part of this, the National Institute

of Technology, Karaikal organised an exposure visit to Fish for All Research and Training Centre for 56 youngsters between the age group of 18–30 years from West Bengal on 19th April 2023. The participants were made aware of the activities of Fish for All center and then they were shown the infrastructures of the center.

- c. Exposure visit of Fisheries Department officials to Fish for All Centre** Eleven Fisheries Department officials including Assistant Director, Inspector of Fisheries and Sub inspector of Fisheries visited Fish for All Research and Training Centre during 9th May 2023. The officials were made aware of the activities, functions and programmes of Fish for All Centre.

4.11 Leveraging government schemes through linkages

The Centre was instrumental in leveraging several schemes and programme to the fishers, fish farmers and tribal families through appropriate networking and linkages. This year 3.8 crore worth of benefits was realised by 466 fishers, fish farmers and tribal communities under eight different schemes and programme from various institutions.

S.No	Scheme Name	Partner Agency	No. of Beneficiaries	Benefits Realized
1.	SCSP, Gol	ICAR-NBFGR Lucknow	20	Farm implements
2.	TSP, Gol	ICAR-NBFGR	5	Crab Fattening unit
2.	SCSP, Gol	ICAR-NBFGR Lucknow	50	Fish Feed and Cast net
3.	SCSP, Gol	ICAR-NBFGR Lucknow	50	Farm inputs
4.	PMFME	Indian Overseas Bank - Kaveripoompattinam	36	Credit Loan for fish based enterprises
5.	TAFCOFED -Loan	Department of Fisheries Govt of Tamil Nadu	125	Credit loan
6.	SCSP plan-	MPEDA Nagapattinam	125	Bio security and personal Hygiene in Aquaculture Farms



5. Major Events held during the year

5.1 Stakeholders consultation on Promotion of FFPO:

A Stakeholder Consultation was conducted on 5th May 2023 at FFA Centre. The District collector, Thiru Maha Bharathi IAS was the chief guest of the event and he briefed the significance of FFPO to the participants. The stakeholders participating in the event highlighted the issues in fisheries, fish farming and fish post-harvest related interventions in the district and how the FFPO can plan a role to address these issues. Followed by stakeholder's consultation, with the financial aid of ICAR- National Bureau of Fish Genetic Resources, 10 lakhs worth of fish feed and fish nets was distributed to 100 inland fishers belonging to scheduled caste community of Mayiladuthurai district under the Government of India Scheduled Caste Sub Plan. Under this programme 50 fish farmers and 15 fisherwomen participated.

5.2 World Environment Day 2023:

On the occasion of the World Environment Day (5th June) a mangrove plantation drive was organized at the Integrated Aquaculture System- Mudusalodai. Shri. Shankar Narayan, Chief General Manager, NABARD flagged the

event and about 550 mangrove sapling were planted with the support of the fishers from Mudusalodai.

5.3 AKAM Mega User Interaction Workshop on INCOIS services

Two Mega Awareness campaigns on Ocean Information and Advisory Services were jointly organized with INCOIS under the Azadi Ka Amrit Mahotsav programme to reach out to the fisher families of Andhra Pradesh, Tamil Nadu, and Puducherry to further enhance the awareness and dissemination of the INCOIS ocean information and advisory services.

On 7th July 2023 at Machilipattinam, Krishna District, the programme was inaugurated by the Union Minister of Ministry of Earth Sciences (MoES) Thiru Kiren Rijju along with Andhra Pradesh State Minister for Animal Husbandry, Dairy Development.

On 11th August 2023 the programme was inaugurated by the Hon'ble Dr (Smt) Tamilsai Soundararajan, Governor of Telangana and Lt. Governor of Puducherry This campaign included an inaugural session and technical session in Telugu in Andhra Pradesh (Machilipattinam) and Tamil in Tamil Nadu

(Chennai), panel discussions with fishermen users to understand their need, issues and future requirements on this important area, lectures from our collaborators viz. Tamil Nadu and Puducherry State fishery departments, Indian Coast Guard, CIFNET, CIFT, FSI, CIBA that helps the fishers with safety and livelihood security.

5.4 International Coastal Clean-up Day 2023

On the occasion of the International Coastal Clean-up Day 2023, a coastal clean-up campaign was conducted at Sangumal Beach, Rameshwaram and Poompuhar Beach, Mayiladuthurai on 16th September 2023 with an aim to bring together individuals, communities, and organizations to work collaboratively in cleaning up our coastal areas, raising awareness about marine litter pollution, and promoting sustainable practices for a healthier ocean ecosystem.

A total of 161 volunteer villagers, students, coastal security police participated in the campaign and collected 604 kg of debris from an area of 600 m along the coastal stretch. The debris collected was composed of glass bottles, plastic bottles, cloth ropes and nets, footwear, foam and thermocol carry bags, polythene fiber urea bags, flowers and coconut glass fragments and others mixed plastics. The segregated debris was handed over to the respective district municipality for proper disposal. Certificates were issued to encourage the volunteers. The event emphasizes the importance of reducing/managing plastic waste.



5.5 World Fisheries Day 2023

On November 21st, World Fisheries Day was celebrated at Fish for all Centre, Poompuhar by launching Audio advisory services exclusively for Fisherwomen on post-harvest fisheries. Tablets were also distributed to fisherwomen SHGs to promote post-harvest literacy while farm inputs were distributed to fish farmers. The programme was inaugurated by Dr.G.N.Hariharan, Executive Director, MSSRF. A total of 115 participants from 29 villages took part in the workshop including key stakeholders from the Department of Fisheries, Indian Coastal Guard, District Industrial Centre, Lead Bank Manager, and Panchayat leaders.

5.6 Webinar on Sea safety and sustainable fisheries

On 27th November, a highly informative and engaging webinar on the topic of "Sea Safety and Sustainable Fisheries Management" was conducted by the Fish for All Research and

Training Centre and Global Fishing Watch. Global Fishing Watch is an International Non-Governmental Organization (INGO) that is committed to promoting ocean traceability and transparency.

The webinar was attended by 55 participants from various organizations including the Department of Fisheries, Department of Forest, NGOs, MPEDA-NETFISH, Marine Police, FISHCOPFED, Universities, Kuddle Life Foundation and ICAR-CIBA. Lo and Ko-Jung, highlighted the activities of Global Fishing Watch while Ms. Dhiya Sathananthan described the Global Fishing Watch map and presented a few case studies on sea safety and sustainable fisheries. The participants gained valuable insights into the subject and appreciated the efforts of the organizers in bringing together various stakeholders to discuss this crucial issue.

5.7 Odisha Fisheries Department and WorldFish Team visit

A seven-member team from the Department of Mission Shakti and Department of Fisheries, Government of Odisha along with two WorldFish project officials visited the Fish for All Centre on 31st July 2023 to gain better understanding about the technology and processes followed by MSSRF for the hygienic production of dry fish with the use of Solar Dryers. The visitors interacted with scientists about the technology used for maintaining high quality of dry fish. They also visited the field sites and interacted with fisherwomen to understand the benefits of the programme on the ground. The team learned about the fish driers used by the Women Self-Help



Groups (WSHG) and their cost-effectiveness, business model adopted by WSHGs in Tamil Nadu for the production of quality dried fish, best practices followed in producing dried fish and value-added products, the business and marketing strategies adopted. Through the Mission Shakti programme, the Government of Odisha aims to cover at least 5,000 Mission Shakti SHGs (Self-help Groups) and 50,000 women members in the state by enhancing their technical capacity to carry out fisheries-based business activities. These efforts are expected to help increase incomes and enhance financial well-being for the fishing communities in Odisha.

5.8 ICAR- NBFGR Director Visit for strengthening partnership

Dr U K Sarkar, Director of ICAR-National Bureau of Fish Genetic Resources (ICAR-NBFGR), Lucknow, visited the MSSRF Fish for All Centre, Poompuhar, and field sites on February 6 and 7, 2023. At Pichavaram, he interacted with tribal communities involved

with in the conservation programmes implemented by MSSRF with support of NBFGR. He visited the crab fattening unit in Mudasalodai fishing village, near Pichavaram backwaters and distributed water crabs to 15 Irular tribal fisher families. He also interacted with members of the Irular community and shared insights on conservation of natural fish genetic resources while discussing livelihood enhancement options. He later visited the portable fish hatchery unit established in the Centre with the financial support of ICAR-NBFGR under its Scheduled Caste sub plan (SCSP) and interacted with the fish farmers. He also interacted with ECAS students on the conservation of fish genetic resources. Dr Ajith

Kumar, Scientist In-charge, The Peninsular and Marine Fish Genetic Resources (PMFGR), Cochin and Dr Kathirvel Pandiyan, Scientist at PMFGR, Cochin, were also present.

5.9 NABARD CGM visit

Thiru. Shankar Narayan, Chief General Manager, NABARD visited the IMFFS farm and the Solar dryer unit established at Mudasalodai in Cuddalore district on 5th June 2023. He appreciated the way the interventions were implemented and interacted with the livelihood groups and gave insights for the empowerment of livelihood groups involved.





6. Success stories

I am Sathya from Mudasalodai, a fishing village in Cuddalore district. With 17 years of experience in dry fish production, I faced financial challenges as my husband's income wasn't sufficient. Determined to improve our situation, I started producing dry fish using available resources.

In 2021, I joined the Women's Self-help Group promoted by Fish for All Centre financially supported by NABARD. With 45 fisherwomen, we received support, including the establishment of solar dryers at our village landing centre. The training programs focused on hygienic handling, quality production, value-added products, branding, marketing, packaging, and entrepreneurial skills, online marketing and credit management.

Amidst personal adversity, having lost my daughter a few months ago, I found solace and strength in continuing my dry fish business. Though unable to personally market my products, I successfully sell them through



supermarkets and grocery stores in Cuddalore district. This has become crucial in providing for my other children, the basic needs.

Social worker to Dry Fish producer

Ms. Sharmiladevi is a 37-year-old social worker who resides in Vanagiri, a village located in Mayiladuthurai district. She studied until 12th standard and worked as a creche teacher for two years. She got married at the age of 20 to Mr. Chandran, who is an active fisherman in the Bay of Bengal region. The couple had three children, and due to her responsibilities as a mother, she had to stop working and became a housewife. However, she occasionally helped out at the daily seashore fish landing centre, where she procured, sorted and graded, iced loaded and unloaded the fish for retail marketplaces in Karvui or Mayiladuthurai fish market.

She has always been interested in social work and, with the help of Tamil Nadu Unorganised Workers Welfare Board, she started helping other women and members of her village. She assisted them in getting their widow pensions, claims of marriage and education loans, and other small tasks. Due to her contributions towards the village members and women, she became a women's cooperative society leader.

After becoming the cooperative society leader, she got a chance to visit the M. S. Swaminathan Research Foundation (MSSRF) Fish for All Research and Training Centre - to express the challenges and needs faced in their day-to-day life. This visit helped her build



a good rapport with MSSRF. In 2022, the Fish for All Research and Training Centre organized a training program on hygienic handling of dry fish using a solar tent dryer. After attending this program, she got the idea to start a small business on dry fish production and its value-added products. Although she knew some basic fish handling, the training taught her the technical aspects of handling fish. She learned how much salt is required per kg of fish, the required soaking period, maintenance and handling of the solar dryer, pricing, labelling, and packaging

She joined as a member of Winmeen Federation and, initially with three members, they invested Rs. 4500 to procure raw materials. The technical support was facilitated by MSSRF for producing dry fish using a solar dryer, and the product was exported to TAFCOFED, generating an income of Rs. 7000 with a profit of Rs. 2500. Later, they formed a self-help group with 12 interested fisherwomen with the support of MSSRF named Nakshatra. From June to December 2022, they started producing hygienic solar-dried fish at Poompuhar. The technical support was

provided by MSSRF, and they procured 230 kg of raw materials, processed and produced 57.5 kg of dry fish. They generated an income of Rs. 17250/- by selling it in the local market and stalls, and the fisherwomen got an income of Rs. 1500 to 2500. She does also encounter challenges such as irregular customers and understands that there is a need to strengthen the market linkages

She expressed her sincere gratitude to the M. S. Swaminathan Research Foundation, which was the main reason for her to start this small business. Her journey shows that with a little bit of technical knowledge and support, anyone can start a small business and, achieve financial stability even in a rural area.

FFMA- A magic wand that helps takes our nets to schools of fish

Ganamoorthy, aged 40 years has 22 years of experience in fishing and hails from Vanagiri, a fishing village in Mayiladuthurai district, where gill nets are used for fishing. He goes for fishing trips up to a distance of 50 nautical miles towards deep sea using FRB boat. He installed the Fisher Friend Mobile Application on October 18, 2021, and since then he ventures into the sea for fishing regularly only after checking the status of wind speed, water current, wave height, GPS and disaster alerts.

He spends Rs. 1500 – 6000/- per fishing trip depending on the distance. So, he has been looking for accurate data on scientific information for compensation of his daily expenses during the times of unexpected weather. He revealed that the OSF information of FFMA is 80-85% accurate. The application also helps in planning the fishing trips according to the weather.



Water current plays an important role in performing cuttle fishing. In the second week of May 2023, FFMA showed that the speed of water current was 0.5 to 1 km/hr which is suitable weather for catching cuttle fish, so he cast the net and got a good catch worth Rs. 3000/-

On another occasion during May 2023, he ventured into the sea for fishing, casted his cuttle fish net nearly 5 km from the seashore and saved the points in the FFMA GPS and returned to the shore. Next day he went to marked location using FFMA –GPS and caught cuttle fish worth Rs. 30,000/-.

Transformation from a timid speaker with a pounding heart to an expressive speaker



Ms. Uthra, aged 36 hails from Kalaignar Nagar, a small tribal fishing village of Cuddalore district. Societal discrimination at school made her loose interest in education, completing only till the 5th class. She still remembers the way her community was treated by the other communities which has disturbed her mentally. A feeling of being inferior pervades the community even today. She has two girl children and her husband Mr. Sakthivel is a back water fisher. They earn their living through selling of shell and fin fish caught with bare hands in the back waters of Vellar- Coleroon estuary. The major issue that they face while performing fishing in the back water is the cuts in hands and legs by the molluscan shells under water. The income they generate through fishing activity was very minimal and it was difficult to meet out their basic family needs. Her financial dependence, illiteracy and social backwardness had also created a fear to face public and as a result she felt menial. But Ms. Uthra was very determinant in educating both her children despite her poverty.

We came across Ms. Uthra during the situation analysis for the IMFFS project in Kalaignar Nagar village and she joined as a member

of group. She is now the leader of one SHG's among the three SHG formed with 35 group members. She is an active participant who never misses group meetings, training programs and exposure visits. She will always be available for all the tasks in the pond from cleaning, stocking, feeding and harvesting.

Ms. Uthra now generates Rs. 2000/- per month through the selling of shell and fin fish from the mangrove integrated farming system established at Mudasalodai. She has now become financially independent to meet out few basic necessities of her kids like, food, snacks and medical expenses.

She felt happy and proud to share the transformation in her financial and self-confidence level. She now clearly speaks out her thoughts without being anxious and she says that all this confidence in her is because of working together through SHGs. Ms. Uthra volunteers to speak in meetings, trainings, exposure visit and other project activities. She has transformed herself to an expressive

speaker as opposed to an anxious and scared speaker with little confidence to face the audience. She has participated as speaker in a seminar on "Resilient food systems and rural women" organized by MSSRF in October 2022 and presented her experience at the work shop entitled "Listening to the voice of coastal

and tribal women and their success stories and awareness on livelihood opportunities including rural tourism" at ICAR- CIBA on 23rd June 2023. She thanked MSSRF for bringing the change in her and NABARD for the financial support.

A Tale of Transformation through Fisheries Entrepreneurship

Ms. Thiruchelvi, a 31-year-old homemaker in Poompuhar fishing village, faced financial strain with her husband's income from fishing. Despite her shyness and dependence, she sought solutions. Discovering the Winmeen Women Federation by FRTC, she underwent training by MSSRF, Poompuhar, in hygienic dry fish production. This training ignited her entrepreneurial spirit.

Challenged by the prospect of starting alone,



Ms. Thiruchelvi, along with 10 fisherwomen, formed the Alaikadal Self-Help Group, supported by MSSRF. They pooled resources, collecting fresh fish locally to initiate dry fish production, creating a sustainable income source.

7. Award & Recognitions

Women Connect Challenge Award

Fish for All Centre has been awarded the 'Women Connect Challenge' (WCC) Award by the Reliance Foundation and the United States Agency for International Development (USAID).



Star Community of Practice Member

Fish for All Centre Training Coordinator Ms Sangeetha U has been featured as Star CoP member in Community of Practice page of Reliance Foundation and USAID for the month of December 2023 for being an active participant in posting blogs and attending webinars.

Award on Women in STEM

Dr S Velvizhi, Head receives the Women in STEM (Research) Award from Andhra Chamber of Commerce during the 95th annual day celebrations in Chennai – 29th August 2023

Membership in various Academic and Research Committees

- Dr. S. Velvizhi : Executive Committee Member for Network Fish for Quality Management and Sustainable Fisheries: 2023-2024
- Dr. S. Velvizhi, Head, Fish for All, Centre: Executive Committee Member for Network Fish for Quality Management and Sustainable Fisheries: 2023-202
- Dr. S. Velvizhi, Head, Fish for All, Centre: Member in Internal Quality Assurance Cell (IGAU) – Tamil Nadu Fisheries University, Nagapattinam
- Dr. S. Velvizhi, Head, Fish for All, Centre: Member in Board of Syllabus Committee, Zoology Department, A.D. M. College for Women, Nagapattinam
- Dr. S. Velvizhi, Head, Fish for All, Centre: Member in Faculty Committee, Faculty of Marine Sciences, Centre of Advanced Study in Marine Biology, Annamalai University

Fish For All Centre Staff -Invited speakers for Major conferences/workshops/trainings

1. Mr. Thamizhazhagan participated as speaker and delivered special lecture on Fisher Friend Mobile Application, Fisheries Department, Sagar Mithra Staff from 22 coastal villages in Mayiladuthurai District on 18th January 2023
2. Ms. Anbuvahini delivered a lecture on "Innovation, Science and Technology for Sustainable Development" at Madras Christian Collage on 6th March 2023
3. Dr. V. Suresh participated as a speaker and delivered Special lecture on "Aquaculture- An Alternative livelihood" at Department of Zoology, Govt Arts and Science college, Thennangur, Wandawasi TK, Thiruvannamalai Dt on 10th April 2023.
4. Dr. S. Velvizhi participated as a speaker in "International workshop jointly organized by KUFOS and the University of Plymouth at Cochin to identify the fishery-related issues in the South Eastern Arabian Sea (SEAS) during 20-22nd April 2023 at Kochi, Kerala
5. Dr. S. Velvizhi participated in the round table discussion on 'Sustainable Fisheries & Allied Marine Conservation in India: Challenges & Opportunities' organized by Ocean 5 Foundation and presented the "Issues and Challenges of small scale fishers in India at the India International Centre, New Delhi. on 3rd May, 2023
6. Dr. S. Velvizhi participated as speaker in "Capacity building of Mission Shakti SHGs for production & marketing of hygienically dried fish and fish farming in Gram Panchayat tanks in Odisha" jointly organized by Odisha Mission Sakthi Department and WorldFish, Odisha during 20th May 2023 – T Bhubaneswar and presented the MSSRF Fish for All Experiences in Dry Fish production in Promotion among SHGs.
7. Dr. S. Velvizhi, participated in "Stakeholders Consultation on Critical Skills Needs in Agriculture' on 31st May, 2023 organized by Australian Partners ASCI and NSFI and presented the skilling gaps and requirement in fisheries sector
8. Dr. S. Velvizhi participated as speaker in "Policy Workshop at Chennai on the Promotion of square mesh cod end" and presented MSSRF experiences in promoting square mesh cod end in Palk Bay region during 16th June 2023
9. Dr. S. Velvizhi participated as Expert in "Workshop to develop the Socio-Economic Indicators and Framework for the GCF project" – organized by NCZM – 4th July 2023 at Chennai
10. Dr. S. Velvizhi participated as speaker in "Mainstreaming Climate Change into International Fisheries Governance and Strengthening of Fisheries Management in the Indo-Pacific Region" and presented the "Preparedness of Coastal Communities" in the special session on India's preparedness for Adapting to Climate Change in Marine Fisheries on 17th October 2023. Ministry of Fisheries,

- BoBp, Gol at Mahabalipuram
11. Dr. S. Velvizhi participated as member in Intra Regional Workshop on "Developing strategies to support Dugong Conservation in the Palk Bay, Tamil Nadu at Mahabalipuram organized by Wild life conservation society (WCS) during 19th - 20th October 2023
 12. Dr.S. Velvizhi participated as a speaker in "Emerging Technologies in India's Fisheries - Special Session at Seafood and Fisheries Emerging Technologies" (SAFET) Conference at Bali, Indonesia on 4th October 2023
 13. Ms.Anbuvahini participated as an expert speaker in "National Children's Science Congress-2023" organised by Tamil Nadu Science Forum and National Council for Science and Technology on 5th November 2023 at Thiruvannamalai,
 14. Mr. Thamizhazhagan participated as speaker and delivered Special lecture on Fisher Friend Mobile Application, Community action Collab on 13th December 2023
 15. Dr. Priyanga S J participated as Speaker and delivered special lecture on Digital literacy for Fisherwomen, Community Action Collab on 13th December 2023
 16. Ms. Anbuvahini delivered a special lecture on "Food, nutrition and health for all" at APSI Labs Pvt Ltd, Chennai on 20th December 2023
 17. Dr.S. Velvizhi, participated as an expert speaker in "National Conference on Integrated Agro-ecological Aquaculture and Aquatic Food Systems for Promoting Livelihood of Women Members in India" and presented the Fish for All experiences in 6-7th November 2023 organized by National Rural Livelihoods Mission, Ministry of Rural Development in Bhubaneswar
 18. Ms. Sangeetha delivered a special lecture on Bio-security and Personal Hygiene in Aquaculture Farms on 15th December at Fish For All centre, Poompuhar conducted by Marine Product Export Development Authority

Staff Participation in Training workshops/ National and International Conferences/ workshops

- Mr. Thamizhazhagan, Mr. Mubarack, Mr. Manikandan, Mr. Sabapathi participated in "Training workshop on Ocean Observation System and Models towards OSF, Coastal dynamics and PFZ" at Vizhag on 20–24th February 2023
- Dr. Velvizhi, Dr. Suresh, Mr. Selvarasu, Ms. Hema and Ms. Kaviarasi participated in two days training programme on "Promotion and formation of FFPOs" was organised by NFDB, Hyderabad on 9th–10th of May 2023
- Ms. Anbuvahini participated the 8th Annual Agriculture, Nutrition and Health (ANH) academy week virtually from 19th June –21st June 2023
- Dr. Velvizhi S & Mr. Thamizhazhagan participated in an "International conference on Seafood and Fisheries Emerging Technologies (SAFET) Conference in Impact at Scale for Sustainable Resilience Future" at Bali, Indonesia on 3–5th October 2023
- Dr. Priyangha, Ms. Sangeetha, Ms. Hema and Ms. Kaviarasi participated in an exposure visit to CIFT, Kochi on 28th November 2023 to gain insights of various post- harvest management techniques, infrastructures, packaging methods

8. Projects and Programmes implemented by the Centre in 2023

In order to address the issues and challenges of fishers, fish farmers and tribal families the Centre has partnered with the state, national and international agencies and received support for implementing research ideas into action at the ground.

S.No	Project title	Supporting Partners
Newly sanctioned – 2023		
1	ICT innovations in Post –harvest Fisheries for Bridging Gender Digital Divide and Building Socio-economic Resilience of Fisher Women in Coastal districts of Tamil Nadu and Puducherry Union Territory	Reliance Foundation & USAID
2	Minimizing the Impact of Ghost Gears to Conserve the Biodiversity of Ramanathapuram Coast through Community- Centric Collective Approach	UNDP- SGP, New Delhi
3	Cluster Based Business Organization: Formation and Promotion of Fish Farmers Producers Organization (FFPOs) under PMMSY	National Fisheries Development Board (NFDB), Hyderabad
4	Survey on Characterization Study on GIFT Tilapia farmers in India	WorldFish, Malaysia
Continued projects from previous years		
5	Observation, Validation and capacity strengthening of ocean state forecast and Marine fisheries Advisory services along Tamil Nadu and Pondicherry coasts.	INCOIS-MoES, Hyderabad
6	Fisher Friend Mobile Application- A decision making tool for marine fisher folks.	Qualcomm US
7	Post-harvest technological intervention and value addition of small pelagic fish (Anchovies) to improve livelihood security of small holder fishers and addressing malnutrition	DST, Gol, New Delhi
8	Integrated Mangrove Fishery farming system to Enhance Adaptive capacity of fishing community to sea level rise in Cuddalore district.	NABARD, Chennai

9	Enhancing the Livelihood of Fisher Women with establishment of tunnel solar dryer technology for quality dry fish production in Parangipettai block of Cuddalore district Tamil Nadu.	NABARD, Chennai
10	Promoting Indigenous fish culture as potential livelihood options for small and marginal SC farm families in Mayiladuthurai district of Tamil Nadu state.	ICAR-NBFGR, Lucknow
11	Promoting Crab Fattening as potential livelihood options for Irular Tribal Fisher women (ST) in Pichavaram, Cuddalore district of Tamil Nadu State	ICAR-NBFGR, Lucknow
12	Every Child A Scientist	Five Star, Chennai
13	Training on Upcycling of ghost gears	World WildLife Fund

9. Publications

Research Articles

Priyanga S J & Velvizhi S; "Shell and fin fish biodiversity in Integrated Mangrove Fishery Farming System model designed in the backwaters of Velar-Coleroon Estuarine complex in Cuddalore district" – Springer-Marine Biodiversity

Article in Books

Velvizhi, S., and K. Nagaswetha. 2023. Capacity Enhancement and Skill Development through OSF and PFZ Advisories for the Welfare and Development of Fisher Community- Ocean Observation Systems and Models towards OSF, Coastal Dynamics and PFZ. INCOIS Publication

S.Velvizhi 2023. Fisher Friend Mobile Application – A Decision making support tool for small scale fishers in India – ICT Applications to enhance profitability of fisheries based enterprises- (<https://www.manage.gov.in/publications/eBooks/ICT%20Applications%20to%20enhance%20profitability%20of%20fisheries%20based%20enterprises.pdf>); ISBN: 978-93-91668-99-0 -74-76

Web Published Articles

Velvizhi, S and Soumya Swaminathan. "A ghostly tale for world oceans day". The Times of India, June 08, 2023. (<https://timesofindia.indiatimes.com/blogs/toi-editorials/a-ghostlytale-for-world-oceans-day/>)

Velvizhi, S and Soumya Swaminathan. "Perunkadal padhukappu enn avasium

- பெருங்கடல் பாதுகாப்பின் அவசியம் ஏன்?". The Hindu Tamil Thisai, June 08, 2023. (<https://www.mssrf.org/wp-content/uploads/2023/06/WhatsApp-Image-2023-06-08-at-6.42.26-AM.jpeg>); (<https://www.youtube.com/watch?v=MQ8g8I81mqQ>)

Velvizhi S & Sangeetha U; Making cyber safety a priority for fisherwomen in Tamil Nadu; October 26, 2023; (<https://www.mssrf.org/small-blog/making-cyber-safety-a-priority-for-fisherwomen-in-tamil-nadu/>)

Velvizhi S; A time for collective action; November 11, 2023; (<https://www.mssrf.org/small-blog/a-time-for-collective-action/>)

Velvizhi.S, Girija DS & Kavitha VP; Promoting sustainable inland aquaculture among small farmers in Puducherry; March 3, 2023; (<https://www.mssrf.org/small-blog/promoting-sustainable-inland-aquaculture-among-small-farmers-in-puducherry/>)

Sangeetha U & Velvizhi S; Making Cyber Safety a Priority for Women in Productive Sector – Efforts of MSSRF in Coastal Villages of Tamil Nadu; 24 October, 2023; (<https://www.womenconnectindia.com/topic/making-cyber-safety-priority-women-productive-sector-efforts-mssrf-coastal-villages-tamil>)

Priyanga S J & Velvizhi S; Unravelling the path of fisherwomen in Tamil Nadu towards digital markets; 30 August, 2023; (<https://www.womenconnectindia.com/topic/unravelling-path-fisherwomen-tamil-nadu-towards-digital-markets>)

Ms. Anbuvahini, Training manual on Costing, Regulation and online WhatsApp business model for dry fish and value added products

Mr. Abdul Salam Training Manual on Python course (Training to children)

Training Manuals

Ms. Anbuvahini, Training Manual on Value addition of Small Pelagic Fishes, 2023





Volunteers remove debris from Sangumal beach on Coastal Cleanup Day

The program was aimed at bringing together civil clubs, students and organisations to help clean up the beach and reduce the amount of waste that pollutes the beach.

By Anand Prasad



A group of volunteers participated in a beach cleanup activity on Sangumal beach on Saturday. The program was aimed at bringing together civil clubs, students and organisations to help clean up the beach and reduce the amount of waste that pollutes the beach. The program was held on Sangumal beach, which is one of the most popular beaches in the area. The volunteers spent the day picking up litter and debris from the beach. The program was a success and the beach is now cleaner than ever before.

ICAR-NBFGR, MSSRF collaborate to produce carp seeds in portable fish hatchery

In a bid to produce quality carp seeds, ICAR-NBFGR and MSSRF have collaborated to set up a portable fish hatchery in Mangaluru.

By Anand Prasad



ICAR-NBFGR officials (left) and MSSRF staff (right) at the portable fish hatchery in Mangaluru.

MANGALURU: In a joint effort, researchers of the Mangaluru Research Foundation (MRF) and the National Bureau of Aquaculture (NBA) have set up a portable fish hatchery in Mangaluru. The hatchery is designed to produce quality carp seeds in a portable and cost-effective manner. The hatchery is located in Mangaluru, which is one of the most popular cities in the area. The hatchery is a success and the fish are now being produced in large quantities.

MSSRF's research centre wins Women Connect Challenge award of Reliance Foundation and USAID

The project of the MSSRF's Fish for All Research and Training Centre in Mangaluru has won the Women Connect Challenge award of Reliance Foundation and USAID.

By Anand Prasad

The Mangaluru Research Foundation (MRF) has won the Women Connect Challenge award of Reliance Foundation and USAID. The award is given to organizations that have made significant contributions to the development of women in the community. The MRF's Fish for All Research and Training Centre in Mangaluru has been recognized for its work in promoting the use of fish as a source of protein and income for women in the community. The award is a testament to the hard work and dedication of the MRF staff and their commitment to the community.

MSSRF launches radio advisory service for fishermen on World Fisheries Day

MSSRF has launched a radio advisory service for fishermen on World Fisheries Day. The service provides information on the latest developments in the fisheries sector and helps fishermen to improve their productivity and income.

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